

Attorney Docket: ARC 3036 RI
Preliminary Amendment

I. AMENDMENTS

Amendments to the Specification:

Please add the following new paragraph and heading before paragraph [0001]:

--CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 60/244,038, filed October 26, 2000.--

Please replace paragraph [0001] with the following amended paragraph:

~~{0001}~~ [0001.1] This invention relates to administering and enhancing transdermal delivery of an agent across the skin. More particularly, the invention relates to a percutaneous drug delivery system for administering a potent pharmacologically active agent through the stratum corneum using skin piercing microprotrusions which have a dry coating of the pharmacologically active agent. Delivery of the agent is facilitated when the microprotrusions pierce the skin of a patient and the patient's interstitial fluid contacts and dissolves the active agent.

Please replace paragraph [0028] with the following amended paragraph:

[0028] FIG. 8 is a graph showing the amount of ~~human growth hormone~~ desmopressin delivered by a microprotrusion array that has been tip-coated as described in Example 2B.

Please replace paragraph [0030] with the following amended paragraph:

[0030] FIG. 10 is a graph showing the ~~amount~~ delivery efficiency of ovalbumin ~~delivered~~ administered by a microprotrusion array that has been tip-coated as described in Example 6B.

Please replace paragraph [0066] with the following amended paragraph:

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[0066] Studies were performed in hairless guinea pigs to evaluate the kinetics of drug absorption through the skin from hGH tip-coated microprotrusion array systems. System application was performed on the flank of the anesthetized animals with an impact applicator delivering an energy of 0.26 J in less than 10 milliseconds. The system applied comprised a coated microprotrusion array device, adhered to the center of a LDPE backing with an adhesive (7 cm² disc). Systems remained on the skin for 5 seconds (n=3) or 5 minutes (n=5). A group of animals (n=5) received a subcutaneous injection of 10 µg hGH. Blood samples were collected at time intervals for plasma hGH determination by ELISA. The hGH dose delivered was extrapolated based on an area under the curve (AUC) calculation compared to IV administration of hGH. Results showed that hGH delivery from the microprotrusion array was the same with 5 seconds (open triangles) and 5 minutes (close circle) wearing times (FIG. 9). On average, 5 [[82 g]] µg of hGH was delivered in each animal, which accounts for approximately 50% of the coated dose. This is to compare with a bioavailability of 65% following subcutaneous administration of hGH, the results of which are shown as "X" (FIG.9).